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EXAMINER

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3623

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/005,862
Filing Date: November 08, 2001
Appellant(s): ERNEST ET AL.

Mark L. Ernest et al.
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed 03/01/2005.

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(1) *Real Party in Interest*

A statement identifying the real party in interest is contained in the brief.

(2) *Related Appeals and Interferences*

A statement identifying the related appeals and interferences which will directly affect or be directly affected by or have a bearing on the decision in the pending appeal is contained in the brief.

(3) *Status of Claims*

The statement of the status of the claims contained in the brief is correct.

(4) *Status of Amendments*

The statement of the status of the amendments is correct.

(5) *Summary of Invention*

The summary of invention contained in the brief is correct.

(6) *Grounds of Rejection to be reviewed on Appeal*

The following grounds of rejection are applicable to the appealed claims. These rejections are set forth in prior Final Office Action, dated 11/23/04, and are repeated below for convenience. However, in light of applicant's remarks and upon further consideration, Examiner has withdrawn the 35 USC § 101 rejections of claims 10-16, since the arguments and the specification make it clear that the "agents" are software agents that are functionally interacting in a technologically based system with an information collection system and an information technology process model. Therefore, in the rejections below, the 35 USC § 101 rejections of claims 10-16 have been withdrawn:

Claim Rejections - 35 USC § 101

35 U.S.C. 101 reads as follows:

Whoever invents or discovers any new and useful process, machine, manufacture, or composition of matter, or any new and useful improvement thereof, may obtain a patent therefor, subject to the conditions and requirements of this title.

Claims 1-9 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

The basis of this rejection is set forth in a two-prong test of:

- (1) whether the invention is within the technological arts; and
- (2) whether the invention produces a useful, concrete, and tangible result.

For a claimed invention to be statutory, the claimed invention must be within the technological arts. Mere ideas in the abstract that do not apply, involve, use, or advance the technological arts fail to promote the “progress of science and the useful arts” (i.e. the physical sciences as opposed to social sciences, for example) and therefore are found to be non-statutory subject matter. For a process claim to pass muster, the recited process must somehow apply, involve, use, or advance the technological arts.

In the present case, the claims only recite an abstract idea. In claim 1, the recited steps of collecting usage data for providing a service at a component, reporting the usage data, constructing a valuation function, correlating the service with a component, and determining values based on the correlation does not explicitly apply, involve, use, or advance the technological arts since all of the recited steps can be performed without the use of any technology (i.e. there is no specific recitation of what is performing the collecting, reporting, constructing, etc. of claim 1 and therefore it could be implemented without the use of technology). Therefore, since the steps of claim 1 only constitute an abstract idea of how to

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value the components, and since the steps of claim 1 do not explicitly apply, involve, use, or advance a technological art, it is respectfully submitted that the claims are directed towards non-statutory subject matter. Furthermore, claims 2-9 contain the same § 101 issues as claim 1.

Additionally, for a claimed invention to be statutory, the claimed invention must also produce a useful, concrete, and tangible result. In the present case, the claimed invention is not concrete because different users would implement the process and produce different outcomes, making the invention not repeatable. The claimed invention constructs a valuation function and uses usage data to determine values. Different users would use different valuation functions and determine different values based on the varying value function. Therefore, it is respectfully submitted that the invention, as claimed, is not concrete.

Since the claimed invention does not produce a useful, concrete, and tangible result and since the claimed invention is not within the technological arts, as explained above, claims 1-9 are deemed to be directed towards non-statutory subject matter.

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claim 1 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

As per claim 1, claim 1 is directed towards managing an integrated IT system having a plurality of components. The claim recites the steps of “reporting the usage data of each component for each service” “constructing a valuation function for valuing each service”, and

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“determining from said correlated services and components a value of each component and a value of said IT system”. It is unclear based on these limitations what the applicant regards as his invention because these limitations fail to identify what is occurring in the process. First, it is unclear as to who or what the usage data is being reported. Second, it is unclear as to how and/or when a valuation function is being constructed and what valuation function is specifically being used. Third, it is unclear how values for components and a value for an IT system is determined based on correlations. Therefore, based on these limitations, it is unclear as to what is distinctly occurring by the Applicant’s invention. Clarification and correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-16 are rejected under 35 U.S.C. 102(a) and (e) as being anticipated by Adriaans et al. (U.S. 6,311,175).

As per claim 1, Adriaans et al. teaches a computerized process for managing an integrated information technology (IT) system having a plurality of components and providing a plurality of services, the process comprising the steps of:

collecting, at each of the components, usage data indicating an amount of use each component receives in providing each of the services (See at least the abstract, column 5, lines

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14-40, column 6, lines 15-35, column 8, lines 15-40, column 9, lines 15-37, and column 11, lines 40-65, wherein monitors of the components collect usage data when providing a service);

reporting the usage data of each component for each service (See at least column 3, lines 30-42, column 5, lines 14-40, and column 8, lines 15-40, wherein the usage data is reported by the monitors to the database);

constructing a valuation function for valuing each service (See at least the abstract, figure 4, column 5, lines 30-50, column 6, lines 15-35, column 8, lines 44-60, column 9, lines 45-67, and column 11, lines 40-65, wherein a valuation function is constructed for valuing each service based on SLA agreements and thresholds);

correlating each service with each component used to provide said service (See at least figure 4, column 4, lines 25-40, column 5, lines 30-50, column 6, lines 55-65, column 8, lines 44-60, column 9, lines 45-67, and column 11, lines 29-40, which discusses correlations between components and services); and

determining from said correlated services and components a value of each component and a value of said IT system (See at least the abstract, figure 4, column 5, lines 30-50, column 6, lines 55-65, column 8, lines 44-60, column 9, lines 45-67, column 10, lines 15-25 and 35-50, and column 11, lines 40-65, wherein a value for a component is determined by valuing the stored data based on the SLAs and a value for the overall system is determined based on each component, the SLAs).

As per claim 2, Adriaans et al. discloses a process wherein said component value is determined from usage statistics accumulated at each component (See the abstract, column 5,

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lines 14-40, column 6, lines 15-35, column 8, lines 15-40, column 9, lines 15-37, and column 11, lines 40-65. The value is determined based on usage information gathered at the components).

As per claim 3, Adriaans et al. teaches a process further comprising the step of evaluating a worth of each component based on multiple uses of said component in multiple services performed by said IT system (See at least figures 4 and 6, column 1, lines 15-40, column 2, lines 50-67, column 3, lines 1-15, column 4, lines 25-40, and column 10, lines 40-65, which discuss the worth of a component based on its uses in the system).

As per claim 4, Adriaans et al. teaches a process further comprising the step of constructing a relationship table identifying the components used in providing each service, wherein a configuration management process is fed by a change management process in order to maintain the relationship table as changes to said IT system are made (See at least column 3, lines 30-46 and 54-60, column 4, lines 30-40, column 5, lines 14-40, column 6, lines 15-35, column 8, lines 15-40, column 9, lines 15-37, and column 10, lines 14-28, wherein a relationship table is constructed which identifies components used in a service. A configuration management process is linked to a change process to keep a database table that reflects the current IT System).

As per claim 5, Adriaans et al. discloses a process wherein valuing a given service comprises determining a value for each transaction conducted in providing that service (See at least the abstract, figure 4, column 5, lines 30-50, column 6, lines 15-35, column 8, lines 44-60, column 9, lines 45-67, and column 11, lines 40-65, wherein a valuing occurs by determining a value for each operation that occurs in providing the service of the system).

As per claim 6, Adriaans et al. teaches a process further comprising the step of providing for each component an agent for accumulating transaction data regarding services provided using

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that component (See at least the abstract, column 5, lines 14-40, column 6, lines 15-35, column 8, lines 15-40, column 9, lines 15-37, and column 11, lines 40-65, which discloses monitors at each component that serve as an agent for collecting operational data and providing that data to the database for further evaluation).

As per claim 7, Adriaans et al. discloses a process wherein said value is determined in said determining step in accordance with the transaction (See at least the abstract, figure 4, column 5, lines 30-50, column 6, lines 15-35, column 8, lines 44-60, column 9, lines 45-67, and column 11, lines 40-65, wherein a valuing occurs by determining a value for each operation that occurs in providing the service of the system).

As per claim 8, Adriaans et al. discloses a process wherein said transaction data includes the type of transaction and a value associated therewith (See at least the abstract, column 5, lines 14-40, column 6, lines 15-35, column 8, lines 15-40, column 9, lines 15-37 and 55-67, and column 11, lines 40-65, wherein the transaction data includes the type of operation and a value associated with this operation).

As per claim 9, Adriaans et al. discloses a process further comprising the step of reporting the transaction data (See at least column 3, lines 30-40, column 5, lines 14-40, and column 8, lines 15-40, wherein the data is reported by the monitors to the database).

As per claim 10, Adriaans et al. teaches a system for managing an IT infrastructure having a plurality of components for providing a plurality of services, said system comprising:

an agent associated with each of the components, said agent identifying each transaction of a service performed by said IT infrastructure (See at least the abstract, column 5, lines 14-40, column 6, lines 15-35, column 8, lines 15-40, column 9, lines 15-37, and column 11, lines 40-65,

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wherein monitors act as agents for each of the components and collect operational data for providing a service); and

an information collection system for collecting from said agents transaction information relating to each service performed, said system determining from said transaction information which of said components are involved in said transaction (See at least the abstract, figure 4, column 1, lines 15-40, column 2, lines 50-67, column 3, lines 1-15, column 4, lines 25-40, column 5, lines 14-40, column 6, lines 15-35, column 8, lines 15-40, column 9, lines 15-37, and column 11, lines 40-65, wherein monitors collect operational data for providing a service by the IT system. A system meeting a SLA is valued and determined using the collected data).

As per claim 11, Adriaans et al. discloses a system wherein said information collection system provides a report which identifies for each service the value of said service and the value of the components used in providing said service (See at least figures 3, 4, and 6, column 1, lines 15-40, column 3, lines 1-10 and 30-50, column 4, lines 30-50, column 5, lines 30-50, column 6, lines 55-65, column 9, lines 45-67, column 10, lines 3-25, and column 11, lines 30-60, wherein a report is made to the system identifying a value for the evaluation of the health of the system and a value for each component. This information is used to update the system).

As per claim 12, Adriaans et al. teaches a system for managing an IT infrastructure comprising: an information technology process model which defines a plurality of groups of processes defining information flow for an integrated management model defining the IT infrastructure for a plurality of IT services (See at least figure 3, column 1, lines 15-40, column 3, lines 1-10 and 30-50, column 4, lines 30-50, column 10, lines 3-25, and column 11, lines 30-60, wherein a process model is defined with a plurality of groups of processes);

a plurality of agents for monitoring each component of said IT infrastructure, said agents collecting transaction information identifying each transaction by service type (See at least the abstract, column 5, lines 14-40, column 6, lines 15-35, column 8, lines 15-40, column 9, lines 15-37, and column 11, lines 40-65, wherein monitors act as agents for each of the components and collect operational data for providing a service);

said agents reporting over said IT infrastructure transaction information to said information process model whereby said information is used by said model (See at least column 3, lines 30-42, column 5, lines 14-40, column 8, lines 15-40, column 10, lines 3-25, and column 11, lines 30-60, wherein the usage data is reported by the monitors over the infrastructure and the information is used to update the model).

As per claim 13, Adriaans et al. teaches a system for managing an IT infrastructure wherein said information is processed to provide a table that identifies for each component the service in which the component participates (See at least column 3, lines 30-46 and 54-60, column 4, lines 30-40, column 5, lines 14-40, column 6, lines 15-35, column 8, lines 15-40, column 9, lines 15-37, and column 10, lines 14-28, wherein a relationship table is constructed).

As per claim 14, Adriaans et al. discloses a system for managing an IT infrastructure wherein said information from said agents are processed to derive a second table identifying a total value of each service based on the information (See at least column 3, lines 30-46 and 54-60, column 4, lines 30-40, column 5, lines 14-40, column 6, lines 15-35, column 8, lines 15-40, column 9, lines 15-37, and column 10, lines 14-28, wherein a second, updated table is derived that identifies a total value for each service based on the information).

As per claim 15, Adriaans teaches a system for managing an IT infrastructure wherein said total value is determined for at least some of said services based on the number of transactions performed by said services (See at least figures 4 and 6, column 10, lines 40-67, column 11, lines 40-65, and column 12, lines 1-25, wherein the total value is determined by the number of operations performed).

As per claim 16, Adriaans et al. discloses a system for managing an IT infrastructure wherein said first table includes a valuation of each component based on said component's participation in each of said services (See at least column 3, lines 30-46 and 54-60, column 4, lines 30-40, column 5, lines 14-40, column 6, lines 15-35, column 8, lines 15-40, column 9, lines 37-67, column 10, lines 14-28, and column 11, lines 30-64, wherein a table includes a valuation of each component based on the component's role in the service).

(7) *Response to Argument*

In the Appeal Brief, Appellant provides the following arguments:

1) That claim 1-16 are within the technological arts, reciting a practical application that makes the claims not a mere idea in the abstract that does not apply, involve, use, or advance the technological arts, and that the rejected claims fall within the pre-computer process activity "safe harbor";

2) Examiner's imposing of the 35 USC § 112, second paragraph, rejection of claim 1 is non-statutory because when the claim is read in light of the specification the claim is understandable;

3) Adriaans et al. (U.S. 6,311,175) does not teach or suggest any structure or process to collect any such usage data as defined in step (1) of claim 1 does not teach or suggest using such usage data to evaluate the value of components of the system;

4) Adriaans et al. does not teach or suggest the ability to determine the value of a component based on its role in performing a service by the IT system;

5) Adriaans et al. does not teach or suggest constructing an evaluation function for evaluating each service, making any calculation to evaluate each service, or correlating each service with a component to provide the service.

In response to argument 1), Examiner first points out that the 35 USC § 101 rejections of claims 10-16 have been withdrawn in light of applicant's remarks and upon further consideration, since the arguments and the specification make it clear that the "agents" are software agents that are functionally interacting in a technologically based system with an information collection system and an information technology process model.

As for the arguments with respect to the 35 USC § 101 rejections of claims 1-9, Examiner respectfully disagrees because there is no technology or technical elements actively used in the implementation of the claimed invention. Claim 1 recites the steps of collecting and reporting usage data, constructing a valuation function, correlating services and components, and determining a value. None of these steps recite or require the use of any technology to be performed. Since all the steps are able to be performed without the use of any technology, claim 1 is not within the technological arts. As to the recitation of "computerized process" in the preamble, mere recitation in the preamble (i.e. intended or field of use) or mere implication of

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employing a machine or article of manufacture to perform some or all of the recited steps does not confer statutory subject matter to an otherwise abstract idea unless there is positive recitation in the body of the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Claims 4-9 depend from claim 1 and contain the same deficiencies.

As for the discussion of the “safe harbor” of the guidelines, Examiner asserts that this argument is not persuasive as there is no pre-computer process activity as required by the guidelines. MPEP 2106(IV)(B)(2)(b)(i) states pre-computer process activity requires the measurement of physical objects or activities to be transformed outside of the computer into computer data, wherein the data comprises signals corresponding to physical objects or activities external to the computer system and where the process causes a physical transformation of the signals which are intangible representations of the physical objects or activities. Examiner points out that there even if the claim requires the measurement of activities to be transformed outside of the computer, there is no implication recited in the claim that this data collected and utilized is ever transformed into computer data usable by a computer. Therefore, claims 1-9 do not fall into this safe harbor set forth by the MPEP.

As for claims 1-9 being concrete and reciting a practical application, Examiner maintains that claims 1-9 are not concrete because the result is not measurable. The values determined in the final step of claim 1 may be either objective or subjective values, and if the values are subjective, the claim is not concrete because the result is not measurable.

In response to argument 2), Examiner respectfully disagrees. First, the discussion of whether the 35 USC § 112, second paragraph, rejection is non-statutory or disclosed in light of the specification is not relevant because the second paragraph of 35 USC § 112 involves whether

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or not the claim is vague and indefinite. While Examiner's wording of the rejection may not have been explicitly clear to the Applicant, the 35 USC § 112, second paragraph, rejection of claim 1 is proper because the Applicant does not particularly point out and distinctly claim the subject matter that he regards as his invention. First, there is no interconnectivity between the five steps recited in claim 1. For example, step 3 states "constructing a value function for valuing each service". However, this value and valuation does not relate to the "value" determined in step 5, since this value of step 5 is determined from correlating services and components. Therefore, this example illustrates how there is no clear connection between the recited steps. Second, the claimed invention does not accomplish the intended use set forth in the preamble of the claim (i.e. managing an IT system). It is unclear as to how collecting and reporting usage data, constructing a valuation function, correlating services with components, and determining from the correlation a value of the components and the IT system specifically accomplishes the managing of an IT system. Therefore, claim 1 does not particularly point out and distinctly claim the subject matter that the applicant regards as his invention and therefore the 35 USC § 112, second paragraph, rejection is proper.

In response to argument 3), examiner respectfully disagrees. Examiner first points out that step (1) in claim 1 specifically recites "collecting, at each of the components, usage data indicating an amount of use each component receives in providing each of the services". This limitation does not recite any specific process or structure used to collect usage data at each component. Adriaans et al. does teach a computerized structure and process for collecting usage data. See figure 3, column 5, lines 15-38, and column 6, lines 20-35 and 46-52, wherein monitors exist at each of the components and collect usage data concerning the amount of use the

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component receives in providing a service. For example, the system monitors and collects the startup times (i.e. usage data) of a database (i.e. component), storing this data in a database of the system. Similarly, the system also monitors usage data such as number of users accessing the component, query volume, and access time. See specifically column 6, lines 20-35 and 46-52, and column 8, lines 15-42.

As for Adriaans et al. teaching the use of the usage data to evaluate the value of components of the system, examiner points to the discussion of the 35 USC § 112, second paragraph, rejection of claim 1 above and further notes that using this usage data to perform an evaluation is not recited in the independent claim. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Claim 1 recites that the collected usage data is reported. The claim then recites “constructing a valuation function for valuing each service”, “correlating each service with each component used to provide said service”, and “determining from said correlated services and components a value of each component and a value of said IT system”. Therefore, there is no clear recitation of what the relationship of the usage data to the construction of the valuation function is. Further, the claim recites correlating each service with the component used to provide the service, but does not clearly state the role of the usage data in this correlation. The final step determines a value of each component and a value of the overall system based on this correlation, again with no clear tie to the usage data.

Assuming for arguments sake that the usage data of the component is correlated along with the component to the service, Adriaans et al. teaches this aspect as well. Adriaans et al. discusses service level agreements (SLAs) associated with components like the database. Adriaans teaches correlating service defined by the SLAs to the usage data of the component.

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See figure 4, column 5, lines 30-50, column 6, lines 55-65, column 7, lines 15-30, column 8, lines 44-60, column 9, lines 45-67. This correlation is used to determine the value of the components.

In response to argument 4), Examiner respectfully disagrees. Examiner points out that the claims specifically recite “determining from said correlated services and components a value of each component and a value of said IT system”. Examiner points out that the claims broadly recite the term “value” without any specific recitation of what the value represents and includes beyond some association with service. Therefore, it is not clear if this value is an objective value or a subjective value. Adriaans et al. specifically teaches monitoring activity of components in an IT system as the system performs to meet service agreements. See figure 3, column 5, lines 15-38, and column 6, lines 20-35 and 46-52. Adriaans et al. further discloses using the data about the monitored components to characterize the worth (or value) of the monitored component in meeting or missing the targeted service performance level, set by the SLA. If the value recited in the claims is an objective value, Adriaans further teaches performing trend analysis, performance optimization, and monitor optimization, all of which involve manipulating objective outcome values. Therefore, Adriaans et al. does determine a worth of a component in managing the IT Infrastructure to meet agreed to service levels. See column 6, lines 45-65, column 8, lines 44-60, column 9, lines 45-67, column 10, lines 15-25 and 35-50, and column 11, lines 40-65.

In response to argument 5), it is noted that the limitations upon which applicant relies (i.e., evaluation function, making a calculation to evaluate) are not recited in the rejected claim. Although the claims are interpreted in light of the specification, limitations from the specification

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are not read into the claims. See *In re Van Geuns*, 988 F.2d 1181, 26 USPQ2d 1057 (Fed. Cir. 1993). Examiner points out that none of the claims contain the terms evaluating, evaluation, or calculation. Claim 1 does recite a “valuation function for valuing a service” and “determining a value”, this language absent in the remaining claims. Therefore, it is unclear as to what specifically the Applicant is arguing since the language (i.e. evaluating, evaluation, or calculation) does not appear in the claims. Assuming that the applicant is arguing the valuation function and valuing of claim 1, Examiner asserts that Adriaans does teach and suggest construction a valuation function for valuing a service, as shown in figure 4, column 7, lines 15-23 and 35-55, column 8, lines 44-60, column 9, lines 45-67, and column 11, lines 40-65, which discuss the constraints constructed from service level agreements (SLAs), these constraints serving as functions to value the service level actually occurring in the system. Adriaans et al. further discloses correlating each service with a component to provide the service, as shown by the correlation of the database (and its startup times) with the service level agreed to for these startup times. See specifically column 6, lines 20-35 and 46-52, and column 8, lines 15-42.

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For the above reasons, it is believed that the rejections should be sustained.

Respectfully Submitted,


Beth Van Doren

Bvd


May 27, 2005

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